



## Why humidify?

For printing...

# Trusted technology

Nortec humidifiers are used by printers around the world to prevent dimensional changes to paper, avoid electrostatic issues, and prevent web

breaks and machinery downtime. Some of the world's largest printing companies, print machinery manufacturers and brands put their

trust in Nortec humidification systems to help them improve productivity and maintain their product quality.



## Global expertise, local solutions

Nortec has manufacturing facilities in Canada, UK, Denmark, Germany, Switzerland and China as well as wholly-owned sales operations in 13 countries and distributors in over 40 more.

The company has been serving the global printing industry for more than 25 years and is highly experienced

in many different processing technologies, climates and all types of print production and finishing facilities.

Humidifier systems are designed for each individual application by print humidification experts to create the optimal production environment. If required, Nortec's regional R&D departments can work with a client's

production team to deliver innovative solutions for specific printing processes.

Nortec's expert humidifier teams can provide installation, commissioning and maintenance support to ensure improved production efficiencies continue to return on the initial investment for many years.



# Improve print productivity with optimum humidity

In the extremely competitive print market, humidity control is essential to maintain productivity at all stages of production and avoid machine downtime and waste.



## Paper

Paper loses moisture rapidly when exposed to dry air. Sheet and web roll paper is typically produced and wrapped to stay in equilibrium with air at a humidity of 50±5%RH. When the ambient humidity falls below this level, paper loses water to the environment from exposed surfaces, changing its shape, dimensions and physical properties.

Below 40%RH, the movement of paper on paper and other surfaces generates electrostatic charges, which cause it to stick together, attract dust and become difficult to handle.

## Platemaking

When the protective film is removed from plates, electrostatic charge is generated. This can attract dust and grit to an otherwise unblemished surface, makes handling difficult and also generates sparks. Maintaining an environment of 45%RH prevents these problems.

## Sheet fed offset

Unwrapped paper in a dry press hall will lose moisture from any exposed surface. Tight edges result, making the paper curl, causing misfeed, misregister, dot doubling and creasing as the paper passes between blanket and impression cylinders. Misfeed also occurs due to electrostatic build-up, making stacking difficult. Printed work awaiting another pass continues to change shape, resulting in misregister.

During finishing, paper that has low moisture content will crack along folds resulting in a lesser quality product or increased wastage.

Maintaining a relative humidity of 50-55%RH in the press hall and bindery resolves these issues.

## Web printing

If air is too dry in the paper store, laydown area and reel stand, the exposed edges of the paper rolls lose moisture and shrink. On the web press,

the distorted paper is then under greater tension at its edges than the centre, causing tears. These web breaks mean substantial downtime as the paper is spliced or rethreaded through the press.

In a dry press hall, the rapid passage of paper through the press generates electrostatic charge. This results in problems with stacking, cutting, trimming and folding, due to sticking.

Web printing is highly productive and any loss of production is costly, but problems relating to dry air can be addressed by maintaining the relative humidity at 50-55%RH. In flexo, with water-based inks, 55-60% is required.

## Digital printing

The problems experienced elsewhere in printing apply equally to digital but electrostatic problems associated with machinery can be a particular issue. To counter this, a relative humidity of 50-55%RH is recommended.

# When it comes to printing facilities, no one has more experience with humidity than Nortec

Nortec has a comprehensive range of humidification and evaporative cooling products to suit any printing facility.

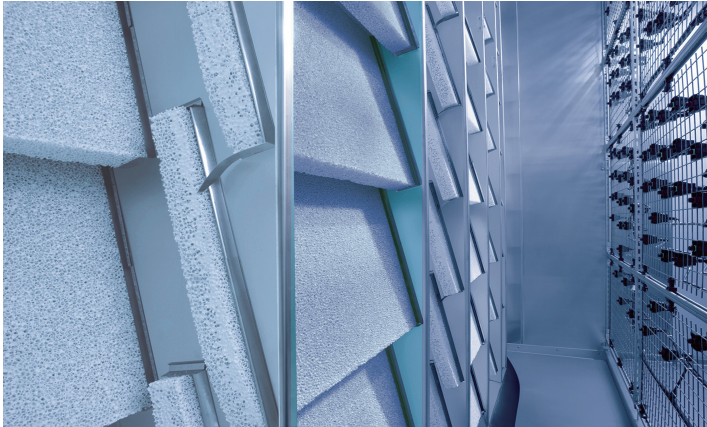
From wall-mounted humidification systems for a small digital print room to extensive spray systems for the

largest of press facilities. Let us help you increase productivity, decreased waste, improve product quality which will all result in higher profits for you.

Nortec has the technology and expertise to provide the ideal solution for all printing processes.

Nortec also offers a wide range of associated products such as water treatment systems, air compressors, pumps and humidity monitors.

DL Series Hybrid Humidifier



ML Series High Pressure Humidifier



Draabe Series TurboFogNeo High Pressure Humidifier



EL Series Electrode Steam Humidifier

As the leading manufacturer of commercial/industrial humidification systems for more than 40 years, Nortec has the technology and application expertise to meet the needs of any application.

**Contact us today and ensure you have the best humidification and cooling solutions for your data center.**

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